



Clean Delaware, LLC

DNREC
Public Hearing

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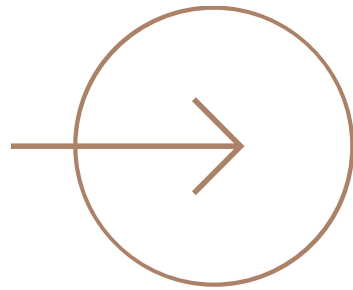
About Us

We are a small and dedicated team of about 50 employees that has been in business for a little over 40 years. Our facility located in Milton and our associated services allow us to serve nearly every resident of the county. Our team is comprised of highly trained licensed on-site technicians and top-tier office staff ready assist with environmental pumping and wastewater solutions.

We are a well-established in the community and strive for consistency and efficiency within our performance. Not only is it in the best interest of our company, but more importantly it is in the best interest of the general public for us to keep our standards high, meet or surpass performance goals and continue to be in compliance with all state, federal, and DNREC specific regulations.



Our Team:



GENERAL MANAGER

Gerry Desmond

Gerry has been our General Manager since 2004, and in the wastewater business for over 20 years. He currently holds a license as WWTP operator and various other DNREC on-site licenses.

OFFICE STAFF

Customer Support + Admin + HR

We have a dedicated office staff that helps run the back end of the business. They handle everything from taking customer calls, handling any walk-in customers, scheduling, dispatch for our drivers and human resources.

WASTE HAULERS

Pump trucks + Pool Water + Roll-Offs + Labor

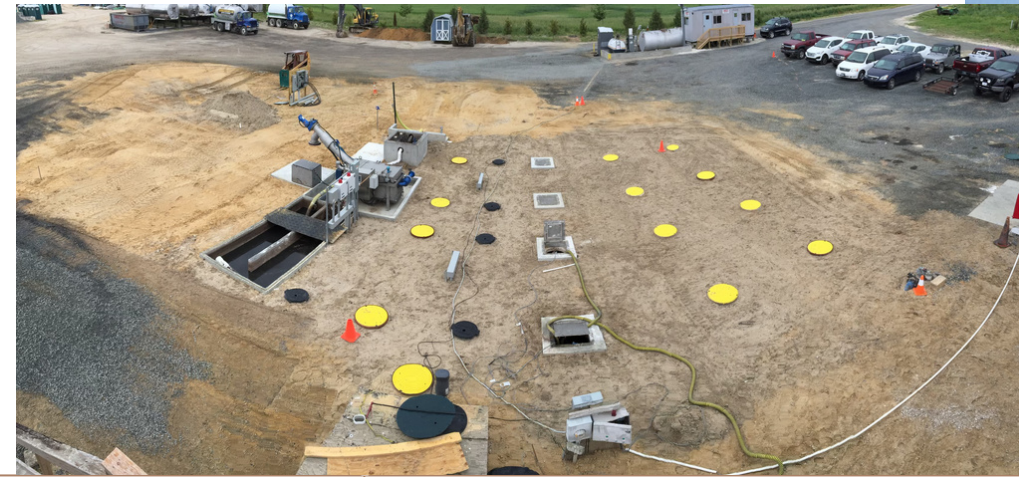
Our drivers and laborers are the heart of our business. If we did not have this dedicated crew, we would not be at the level of business and customer satisfaction that we are. They are the face of our company and they take their roll very seriously.

INSTALLATION TEAM

Septic Inspections + Repairs + Installations

Our installation crews attends to septic system installation, repair, inspections, and operation and maintenance contracts. The majority of our installation business is replacing failing septic systems that pose an immediate risk to the environment. Many of the new systems include I&A technology to remove N.

Milestones



1981

Clean Delaware Inc. starts business operations & obtains its first DNREC permits

2004

Ownership changes and business is diversified to include septic installations and portable toilets.

2013

Wells are first installed at our farm to measure groundwater depth then upgraded to include monitoring nitrate levels.

2015

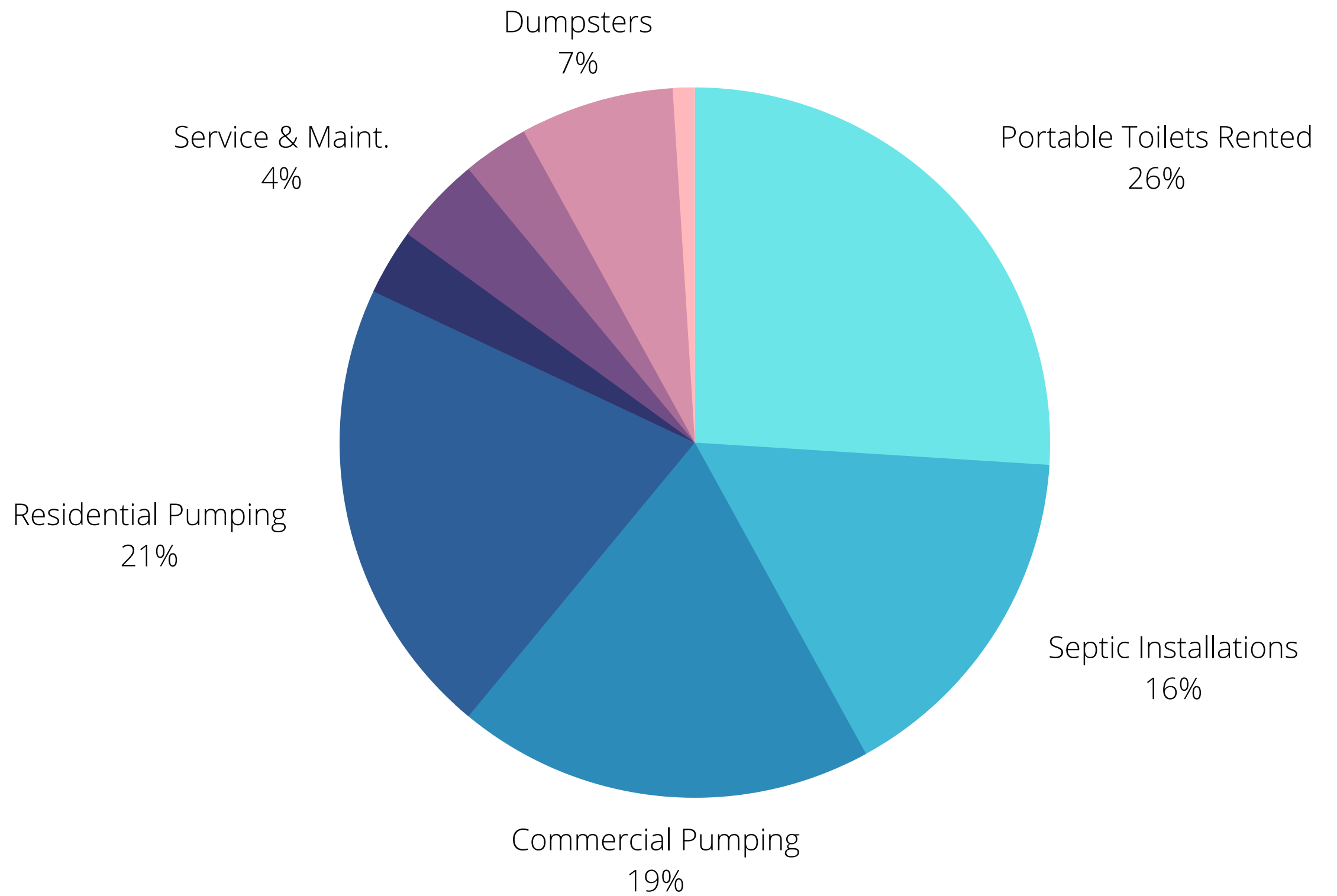
Fire at Milton farm - total rebuild and upgrade of our wastewater treatment facility

2019-2020

Significant upgrades to farming practice through the installatin of fresh water pivot irrigation systems.

Our Business: By The Numbers (2021)

Portable Toilets	26%
Residential Pumping	21%
Commercial Pumping	19%
Septic Installations	16%
Dumsters	7%
Service & Maintance	4%
Brewery Waste	3%
Restaurant Grease	3%
Misc. Billing	1%



Our Business: By The Numbers (2021)

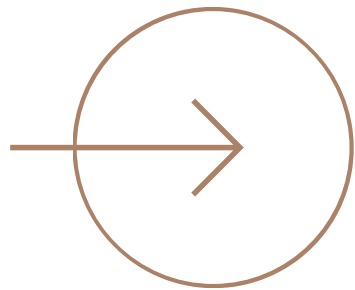


5000+ residential septic system equivalent pump-outs were completed in 2021 and run through our facility

Including:

- 260+ Class H Real Estate Septic Inspections
- 220+ Operation & Maintenance Contract Inspections
- 200+ Emergency Septic pump-outs
- 300+ Holding tank pump-outs
- 250+ Service Calls
- Outside handlers brought us roughly 1000 septic tank pumpings

Lime Plant Process



01 How it works

Our technicians visit sites, usually residential and empty and clean septic tanks. Once the tank is pumped, the product is taken to the Clean Delaware Receiving plant for offloading.

02 Offloading

The septage is unloaded into a lakeside rotating drum screener. The screener captures inorganic materials such as tampons and their applicators, condoms, latex gloves, wipes, and diapers. These items are compacted and dewatered prior to being discharged into a sealed debris plastic containment bag that will eventually go to the landfill.

03 Decanting solids

The product that makes its way out to a decanting chamber where septage flows through a channeled tank at a reduced speed conducive to dropping inorganic settleable solids out of the waste stream. These solids include sand, stone particles, and silt.

04 Lime stabilization

Hydrated lime is added at a rate necessary to achieve and maintain a pH of 12 for 2 hours. The typical ratio is 8 to 9 40 pound bags per an 18,000 gallon batch of septage. After 2 hours of mixing and monitoring, the product has now met EPA 503 requirements.

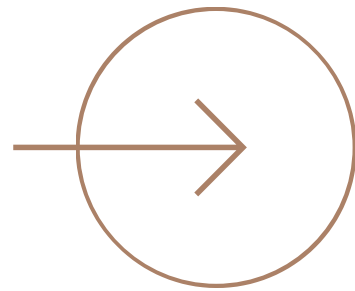
05 Land Application

Traveling hose reels are calibrated to retract at 5 ft per minute. The effective throw is 230 foot diameter at 135 gpm. Our instantaneous application rate not accounting for evapotranspiration is just under 2/10 of an inch irrigation of water per acre per pass.

Visualizing Our Work: Off Loading



Grease Trap and Brewery Waste



01 Grease traps

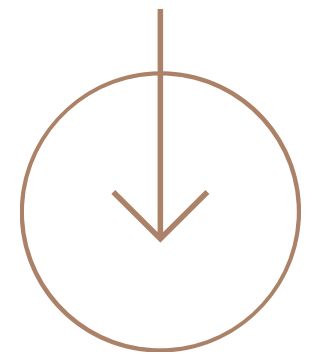
If you eat out at a restaurant or shop at a grocery store, we probably handle their grease. Grease traps are in the floor or under sinks at restaurants, hospitals, schools, and grocery stores. Larger traps might be outside and under the parking lot. Anyone that cooks commercially should have one.

02 Yellow grease

deep fryer grease or what we call yellow grease is completely different and we do not handle this product. Clean Delaware does not service the yellow grease industry.

03 Beer

I've been told it takes roughly 20 gallons of water to make a pint of beer. Since Dogfishhead Brewery (aka Boston Beer) started breweing beer in Milton, Clean Delaware has been there to assist. While we don't receive near what we once did. Dogfish is an important partner with Clean Delaware.





01

Why we take it

WWTP do not accept grease no matter the scale. This is a product that compromises the WWTP. The accepted practice of disposal is land application.

02

Sampling

Clean Delaware has requested quarterly sampling of Brewery and Grease trap waste instead of bi-monthly. We receive very consistent products and they contains no sanitary waste component.

Without sanitary, we've also asked to reduce metals testing requirements.

03

Storage

Grease trap and brewery waste is typically stored in one of three 22,000 gallon frac tanks at our facility, mixed and contained until conditions are adequate for land application.

04

Land Application

Passes are made across the field using a tractor to pull a pressurized liquid spreader with a deflection plate. We apply over actively growing millet at agronomic rates. The fields are subdivided into smaller portions and a crop removed immediately following application.

Our Treatment Facility:

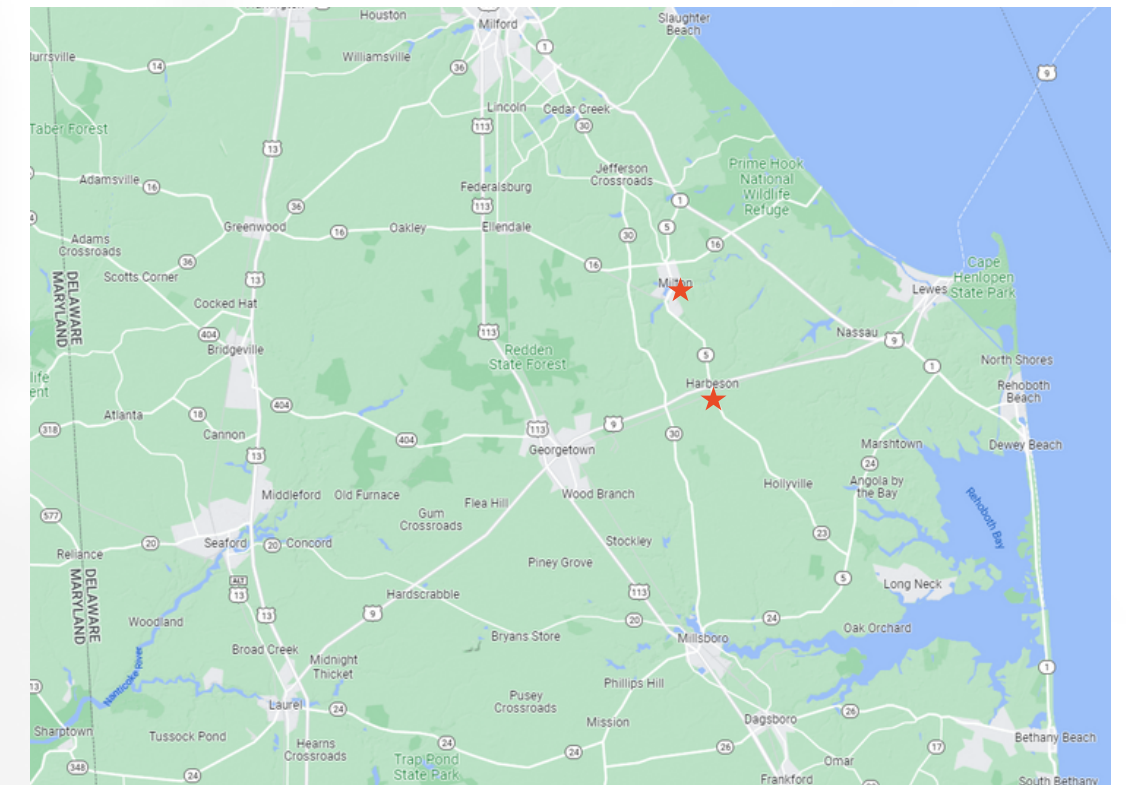
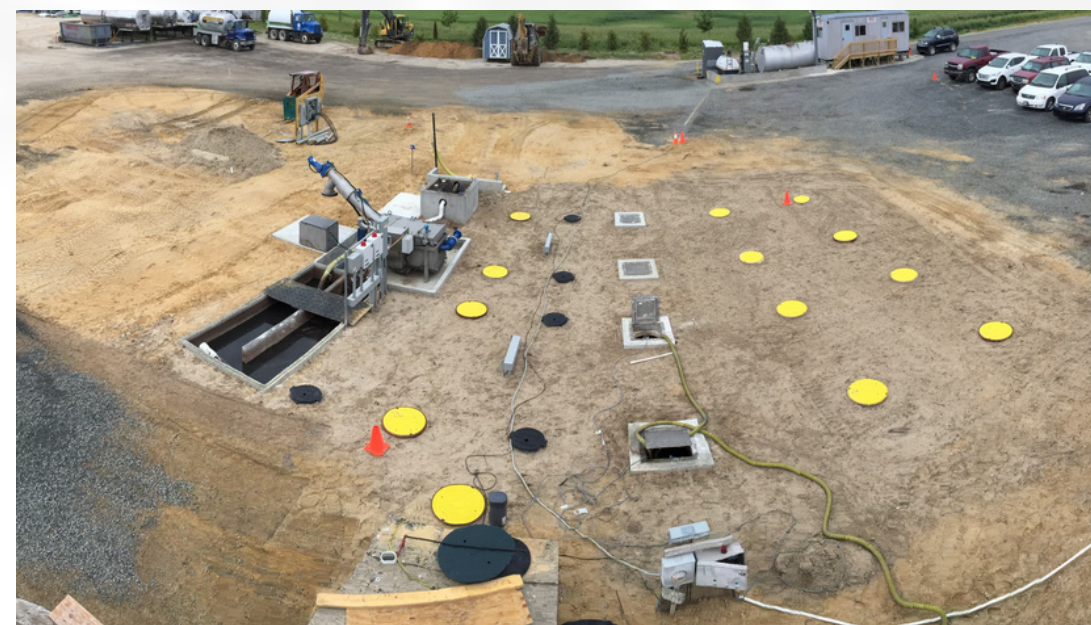


Aerial Overview

Milton Facility + Farm



Plant renovation 2015



Current Land Application Locations

(Milton & Harbeson)

WWTP biosolids

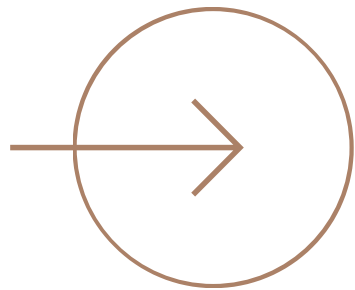
01 Sources

In the past Clean Delaware assisted with the WWTP Class B biosolids needs of Allen Harim, Perdue, Lewes, Milton, Bridgeville, Selbyville and others.

02 Today

Clean Delaware has scaled back operations regarding the land application of sanitary sludge. In 2021 only sludge generated by the town of Selbyville.

03 Farming BMP's



Clean Delaware follows a comprehensive Nutrient Management Plan and includes detailed soils testing. We work in cooperation with a subcontracted farmer who plants a crop, provides supplemental fertilizer, oversees pivot irrigation then harvests. All fields have cover crop for winter protection.

04 Land Application

Biosolids we receive are required to be subsurface injected at agronomic rates. A tractor pulling a liquid spreader with sweep injectors delivers the product just below the surface layer but still readily available for nutrient consumption by the crop.

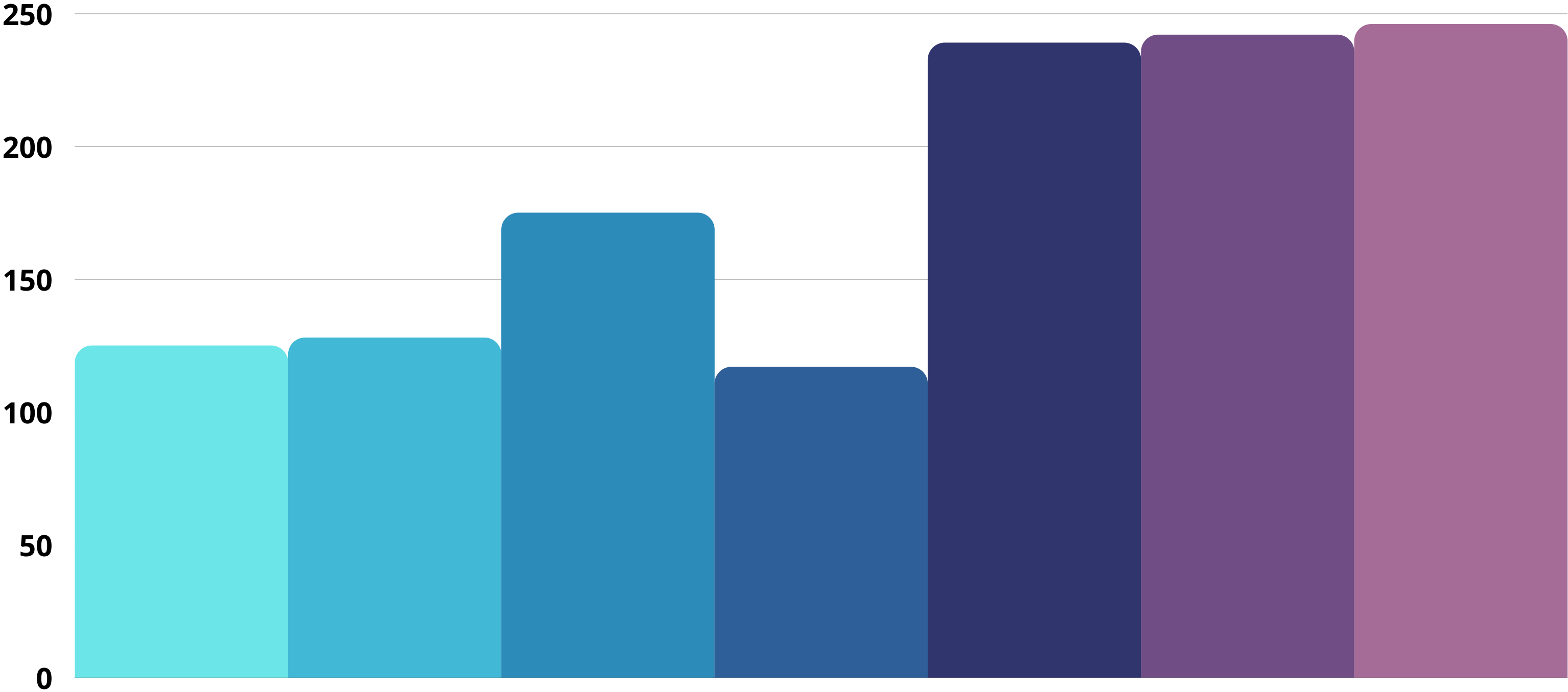
05 BARRS

Biosolids and Residuals Reporting Sytem is our quarterly method of reporting land application activities to DNREC. The report includes lab data from products received, farm maps, field summaries, crop reports, soils data and more.

AVERAGE BUSHELS OF CORN HARVESTED PER ACRE YEARLY

*Irrigation installed 2019

2015 2016 2017 2018 2019 2020 2021



Why Our Work Is Important:

We understand that our waste treatment process is ever-evolving to ensure that what we are putting out into the community via land application is the cleanest that we can get. This includes constant monitoring of the nitrate levels in our wells and consulting with our hydrogeologist on a regular basis.

To address and correct any increase in nitrate levels we are reviewing current conditions at the area of operation as well as application rates, sources, materials and operations history for any unusual occurrences and releases. We will continually sample our wells for nitrates and adjust the nitrogen application accordingly. We will also continue to assess trends in precipitation, groundwater elevation and the nitrate levels in the groundwater entering our site from upgradient areas

Our Partners + Affiliations

Not only do the affiliations and partnerships we have ensure that we are current on all industry and business-specific regulations and trends, but, they help promote and generate our business showing potential customers that we are a reliable and trustworthy company, that provides quality technicians to do exceptional work. Some of the partnerships and affiliations we have are below.



Delaware Rural
Water Association



The Builders and
Remodelers Association of
Delaware



Chamber of
Commerce Greater
Gorgetown



Delaware On-Site
Wastewater Recycling
Association



Milton Chamber of
Commerce



Milton Historical
Society



Delaware
Restaurant
Association



Portable Sanitation
Association
International

Better worksites
Better weekends
Better world



National
Homebuilders
Association



National Association
of Wastewater
Technicians



Rehoboth Beach -
Dewey Beach
Chamber of
Commerce



Sussex County
Association of
Realtors

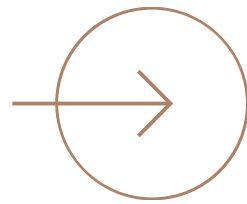


Delaware State
Chamber of
Commerce



Delmarva
Chicken
Association

Community Concerns



Concern:

High Nitrogen Levels In Monitoring Wells

Elevated Nitrogen levels were determined to exist in monitoring wells and adjacent neighboring wells. At that time, all activities attributed to this spike were seized and immediate water supply options were offered.

Concern:

Farming + Land Apply Practices

Began subdividing existing fields into smaller portions w/continuous grass crops with loading amounts that do not burn the grass or attract vectors.

Concern:

Well Monitoring

Verdantas LLC has been retained to provide professional geologist evaluations of operations over the past few years, investigate the causes of increased nitrogen levels in monitoring wells and provide steps to mitigate groundwater impacts related to land application.

Concern:

Nutrient Management Plan

With the help of pivot irrigation, we can better control our crop yields and have more certainty that nutrients are not escaping the root zone and moving into groundwater.

Concern:

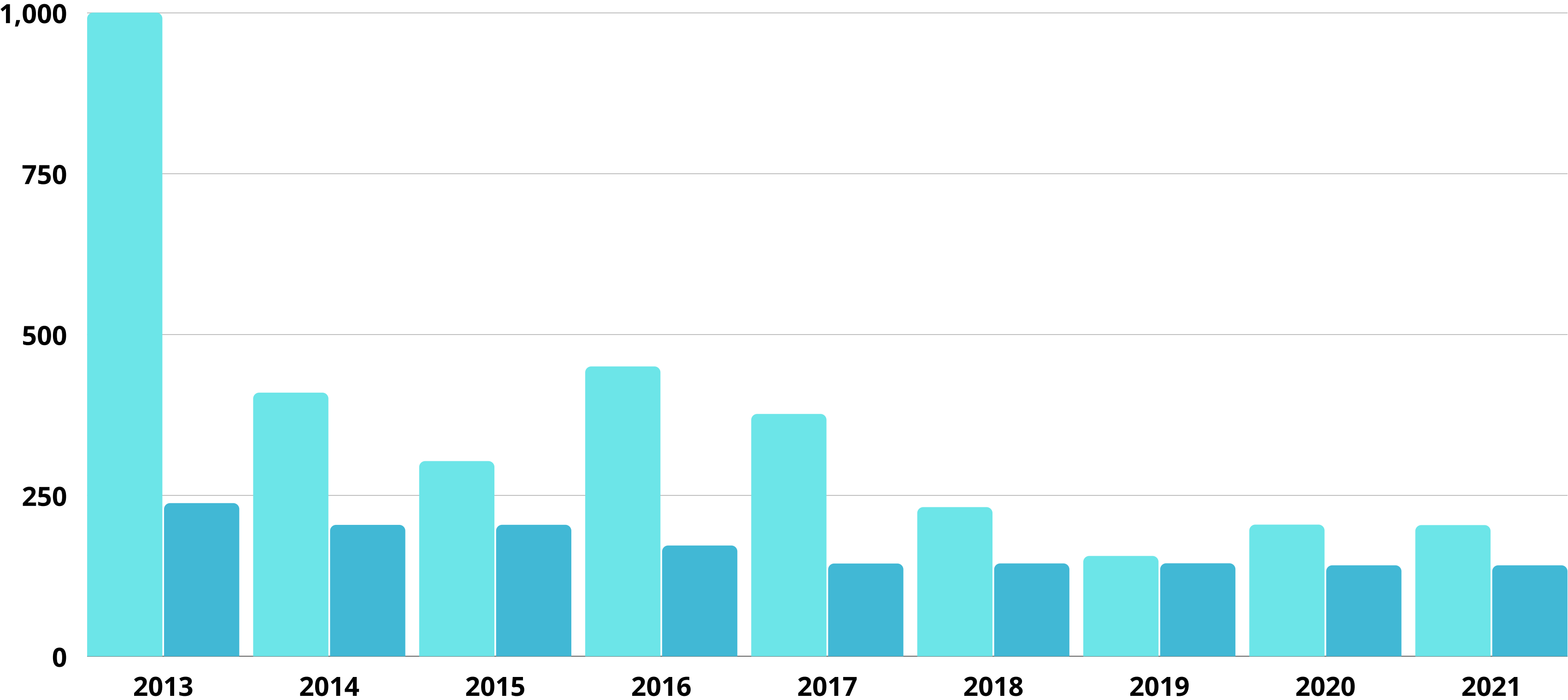
Sampling

Our permit requires us to provide analytical soil sampling and product sampling. Prerequisite to reduce sampling only apply to non-sanitary products including grease and brewery waste.

DMT APPLIED PER ACRE

2013 - 2021

DMT Applied Tillable Acres





Thank You!

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